

Appln. No.: 09/857,634
Amendment Dated November 22, 2005
Reply to Office Action of July 27, 2005

NSG-194US

Remarks/Arguments:**Information Disclosure Statement**

Applicants filed an electronic Information Disclosure Statement (IDS) on October 16, 2004. A copy of the electronic IDS, the electronic transmittal letter, and the acknowledgement receipt are attached hereto. To date, an Initialed and signed copy of this IDS has not been received. Applicants request that an initialed and signed copy of this IDS be provided.

Status of Claims

Claims 1-16 are presently pending. Claims 1-3 stand rejected and claims 4-16 are withdrawn from consideration. Claim 1 is amended herein. Support for the claim amendment is found throughout the specification as originally filed and specifically at page 12, line 6 through page 14, line 3 and in figure 11. No new matter is added by the claim amendment. Entry and approval is respectfully requested.

Examiner Interview

An in-person interview was held on October 27, 2005 at the U.S. Patent and Trademark Office. In attendance were Ken Nigon and Stephen Weed of RatnerPrestia on behalf of the applicants, and Examiner Dzung Tran, and Primary Examiner Agustin Bello. The applicants appreciate the courtesies extended by the Examiners. The limitations of claim 1 and the Kang reference were discussed during the interview. No agreement was reached.

Rejection under 35 U.S.C. §103(a)

Claims 1-3 are rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,268,943 to Kang (herein "Kang") in view of U.S. Patent No. 6,271,945 to Terahara (herein "Terahara"). In view of the amendments and remarks set forth below, reconsideration is respectfully requested.

Claim 1 is directed to a light-receiving element array, and recites:

a plurality of light-receiving elements for monitoring signals for each of the respective channels, and a plurality of light-receiving elements for monitoring noises for each of the respective channels, wherein the light-receiving elements for monitoring signals and the light-receiving

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elements for monitoring noise are alternately arrayed in a straight line . . . and wherein the light-receiving elements for monitoring noises are positioned relative to the light-receiving elements for monitoring signals such that a signal shift of a monitored signal results in the monitored signal being received concurrently by one of the light-receiving elements for monitoring signals and by one of the light-receiving elements for monitoring noises"

This arrangement enables signal and noise monitoring for each of the respective channels, individually. Additionally, this arrangement enables the detection of signal shift and signal spread of monitored signals.

Kang discloses noise channels set at both ends of a signal wavelength band that includes signals at multiple channels. More particularly, in the Kang signal-to-noise (SNR) measurer, "two channels present at both ends of a signal wavelength band are designated as noise channels and optical SNRs are measured from two signal channels adjacent to both the noise channels,...a wavelength division demultiplexer 100 is configured to separate the wavelength division multiplexed optical signal into the two noise channels CH0 and CH(n+1) as well as the signal channels CH1 to CHn." (See Kang at column 4, lines 10-26 and Fig. 3). Further, Kang discloses that "some adjacent signal channels within a signal wavelength band may be designated as a noise channel," (see Kang at column 5, lines 33-35).

Kang is silent, however, regarding a plurality of light-receiving elements for monitoring signals for each of the respective channels and a plurality of light-receiving elements for monitoring noises for each of the respective channels, where the light-receiving elements for monitoring signals and the light-receiving elements for monitoring noise are alternately arrayed in a straight line and are positioned relative to one another such that a signal shift of a monitored signal results in the monitored signal being received concurrently by one of the light-receiving elements for monitoring signals and by one of the light-receiving elements for monitoring noises. That is, the structure disclosed or suggested by Kang (i.e., that either the two end channels or a channel between some adjacent signal channels be used for noise monitoring) is different from that of the claimed invention recited in claim 1 (i.e., that for each channel there is a light-receiving element for monitoring a signal and a light-receiving element for monitoring noise, that these light-receiving elements alternate, and that a signal shift of a monitored signal results in the monitored signal being received concurrently by one of the lights-receiving elements for monitoring signals and by one of the light receiving elements for monitoring noises). The relative positioning of the light-receiving elements for monitoring

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noises and the light-receiving elements for monitoring signals enables signal shift and signal spreading detection, rather simply monitoring signals in some channels and noise in other channels. Accordingly, Kang does not disclose, teach, or suggest each and every limitation of claim 1.

It is submitted that Terahara does not overcome the deficiencies of Kang. Terahara discloses a spectrum monitor using "a photodetecting array 54 having a plurality of opto-electric conversion elements 54A located so as to receive the lights dispersed by light dispersing device 50... A signal processing circuit 56 receives the signals from photodetecting array 54 and detects spectrum peak values of signal lights in all the channels of the WDM signal light." (See Terahara at column 8, lines 1-4 and 18-20.) While Terahara does measure the SNR in each channel, it does not do so by using separate signal and noise light receiving elements in each channel. Instead, it measures an electrical SNR using a Q-factor monitor.

Accordingly, the cited art of Kang and Terahara taken singularly or in any proper combination does not disclose, teach, or suggest the recitation in claim 1, and, thus, claim 1 is submitted to be allowable.

Claims 2 and 3 each include all the features of claim 1 from which they ultimately depend. Thus, claims 2 and 3 are also allowable over the cited art for at least the same reasons set forth above for claim 1.

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Conclusion

Accordingly, applicants contend that the claims now pending and under consideration are in condition for allowance. Reconsideration and allowance of all these claims are respectfully requested.

Respectfully submitted,

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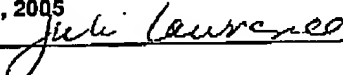
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